ROCKY FLATS PLANT, STANDARDS LABORATORY
Immedietely north of the 215A water tower & adjacent to
Third St.
Golden vicinity
Jefferson County
Colorado

HAER No. CO-83-AD

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
1849 C St. NW
Washington, DC 20240

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ROCKY FLATS PLANT, STANDARDS LABORATORY HAER No. CO-83-AD
(Rocky Flats Plant, Building 125)
Located immediately north of the 215A water tower and adjacent to Third Street.
Golden Vicinity
Jefferson County
Colorado

Photograph CO-83-AD-1 was taken by Rockwell International on 20 October 1987.

CO-83-AD-1 VIEW OF THE INTERIOR OF BUILDING 125, THE STANDARDS LABORATORY. THE PRIMARY FUNCTION OF THE STANDARDS LABORATORY WAS TO ENSURE AND IMPLEMENT A SYSTEM OF QUALITY CONTROL FOR INCOMING MATERIALS USED IN MANUFACTURING PROCESSES. SEVERAL ENGINEERING CONTROLS WERE USED TO ASSURE ACCURACY OF THE CALIBRATION PROCESSES INCLUDING: FLEX-FREE GRANITE TABLES, AIR LOCKED DOORS, TEMPERATURE CONTROLS, AND A SUPER-CLEAN ENVIRONMENT.

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HISTORIC AMERICAN ENGINEERING RECORD

ROCKY FLATS PLANT,
STANDARDS LABORATORY
(Rocky Flats Plant, Building 125)

HAER No. CO-83-AD

Location: Rocky Flats Environmental Technology Site, Highway 93, Golden, Jefferson County, Colorado. Building 125 is located immediately north of the 215A water tower and adjacent to Third Street.

Significance: This building is a secondary contributor to the Rocky Flats Plant historic district, associated with the United States strategy of nuclear military deterrence during the Cold War, a strategy considered of major importance in preventing Soviet nuclear attack. Bullding 125 was constructed in the mid-1960s, and was one of four service laboratories at the Plant. The primary function of the Standards Laboratory was to ensure and implement a system of quality control for incoming materials used in manufacturing processes.

Description: Building 125 houses the Standards Laboratory, offices for Metrology Laboratory management personnel, and the Metrology Systems Group. The Standards Laboratory, a function of Metrology, is comprised of several component labs, including physical, dimensional, chemical, and electrical. The Standards Laboratory provides National Institute of Standards and Technology traceable calibration equipment and standards for the Measurements and Test Group.

The Standards Laboratory is a one-story, rectangular-shaped, steel-framed, prefabricated building with a 6" slab-on-gravel foundation. Outside dimensions measure 90' x 143' (12,870 square feet). The overall building height is 16' from slab to roof. The exterior walls are sandwich-type metal-on-glass fiber insulation. The interior walls have dropped ceilings and are constructed of concrete block, gypsum board, or stainless steel/polystyrene panels. Windows, on the east side only, are fixed, multi-paned, with metal sash. The roof is metal with a medium pitched gable. The boundaries for Building 125 are generally defined by the exterior walls of the facility.

Specific work areas include Rooms 104, 105, 110, and 111 (laboratory and calibration areas). Rooms 115, 116, 117, 118, and 119 represent "modulabs" or specialized labs that required precise climate controls. Support areas include Room 103 (computer room), 109 (receiving/shipping and storage), and 125 (utility/service area). Door 1, located on the north end of the building, serves as the normal egress and entrance for the building. On the south exterior, there is a concrete pad with a steel supported roof over the exterior of doors 2 and 3 of Room 109. This area is used to store flammable materials in fire resistant storage cabinets. A system of monorails is used to move materials in and out of Room 109.

Utilities, located on the western exterior of the building, include domestic water, fire protection water, steam, telecommunications, drain systems, and electrical power. Equipment includes the

fire protection water standpipe, an evaporative cooler, electrical transformers, and an air conditioning unit.

History: Building 125, Standards Laboratory, is one of four main service laboratories at the Rocky Flats Plant. The other service laboratories include: Building 123, the Health Physics Laboratory; Building 559, the Plutonium Laboratory; and the General Laboratories contained in Building 881.

The primary function of the Standards Laboratory is to ensure and implement a system of quality control for incoming materials used in manufacturing processes. The Standards Laboratory is used to prepare stock solutions for the other labs, and to perform analyses on incoming radiological sources for quality assurance/quality control purposes. Calibration and standardization of equipment is also performed to assure that operations are in accordance with manufacturer specifications. One section of the lab certifies dimensional measurements such as length, angles, and roundness of equipment. Occasionally the lab acted as a referee when discrepancies arose regarding dimensional measurements of non-nuclear product. In those instances, the non-nuclear component in question was transferred to the lab for final measurement.

Construction of Building 125 began during the second phase of expansion, occurring between the years 1964-65. Eleven (11) buildings were built during this time period and included research/development laboratories, guard houses, and waste water facilities. Actual construction of Building 125 began around 1965; two later additions were added in the late 1960s to the southern end of the building.

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